

## Does Community Managed Risk Reduction Work?

### Experiences with the Eruption of Mount Merapi in Indonesia

#### Part I: During the eruption



Mount Merapi Photo by: Koramen H. Sirait.

#### CMDRR Framework

Cordaid aims to increase resilience of communities through the approach of Community Managed Disaster Risk Reduction (CMDRR).

The **CMDRR framework** consists of the following fields of action:

1. Training of NGO staff and communities on CMDRR process;
2. Community managed disaster risk assessments and analysis;
3. Creation and implementation of risk reduction action plans to address priority risks;
4. Formation of community structures to manage the CMDRR action plans;
5. Community managed documentation, monitoring & evaluation systems.

CMDRR is different from most other DRR approaches in that it starts at the community level, by stimulating and facilitating community members to increase their own capacity to address disaster risk. It is not implemented *in* communities, but *by* communities themselves, who lead the way. In this way, CMDRR enables communities and individuals to prepare themselves for hazards in a way that reflects their own priorities and builds on their capacity and knowledge.

with Forum FPRB (DRR forum) on their back. Their community knows them as supporters and coordinators; the local government (district and sub-district) is listening to them. Because of this, they can function as mediators between the villagers and the authorities during risk situations. There are at least two women in each DRR Forum. These women play an important role in ensuring that the needs of particularly women and children are considered in aid management.

On October 26<sup>th</sup> 2010, Mount Merapi, one of Indonesia's most violent volcanoes, erupted after four years of sleep. This first eruption resulted in approximately 60,000 people in the third ring of danger, which means living in a radius of 10km from Merapi's crater. They had to evacuate to safer areas below the 10km danger or exclusion zone.

Since 2002 Cordaid supports Community Managed Disaster Risk Reduction (CMDRR, for explanation see textbox) in different countries in the world, among which Indonesia. In Indonesia, Cordaid works with partner organizations Bina Swadaya and Insist at village level in several districts in Central Java and Yogyakarta province. In the district of Magelang, located in the area affected by the eruption, Cordaid has a long relationship with four villages (Sengi, Krinjing, Ngargomulyo and Sumber) through the work of her local partner Bina Swadaya. The eruption of Mount Merapi provides a real life case that informs all involved about the effectiveness of the CMDRR work. Therefore, Cordaid started to document events during and after the eruption to identify lessons for future CMDRR efforts.

#### Before the disaster

During the CMDRR programme, partner Bina Swadaya worked with the communities of the villages Sengi, Krinjing, Ngargomulyo and Sumber to explore the risks they faced in their villages. These villages are located in the third ring of danger from Merapi's eruptions, meaning the most dangerous area at the volcano. Bina Swadaya and the communities also analysed how they could reduce the risk through working together. The community made a village evacuation route, which was revised a few weeks before Merapi's eruption.

**Formation of community structures** For a village to cope with risks like these it is important to be organized and to know what to do when a hazard strikes. Bina Swadaya assisted in the establishment of DRR forums in the villages. These forums have the task to engage communities in identifying threats and risks. Also, they organize preparedness measures and have to be ready to provide relief in case a disaster takes place. Each DRR forum has a distinctive and colorful T-shirt

With regards to the Merapi eruption, the DRR forums undertook the following preparedness measures.

**Distributing masks** On Friday the 22<sup>nd</sup> of October, before Merapi erupted, the village DRR forum in Ngargomulyo distributed masks to the community as Merapi's status was confirmed by the government to be "Siaga", meaning "prepared". This is the third level of warning for volcanoes in Indonesia, when the seismic activity increases and could quickly lead to highest alert for forthcoming hazard - "Awat" or "Immediate Danger." If the alerts are not addressed wisely, a disaster could arise. The distribution of masks reduced the risk of the community inhaling the ash and gases when Merapi would erupt.



*Pak Yatin, Village Head of Ngargomulyo, looking tired after days of pre and post evacuation support to his village, photo by Ama Harwani*

**Evacuating the most vulnerable** During the weekend of 23-24 October, the DRR forum in Ngargomulyo decided to send the village women, children and elderly to the pre-arranged evacuation points more than 10km from Merapi's crater to ensure their safety. In the other three villages DRR forums started evacuations on or after the 25<sup>th</sup>, the day that the government increased the warning level to the highest level "Awat".

#### **During the disaster**

**Evacuation of the remaining villagers** The situation changed rapidly in the following days: the highest level of warning "Awat" was issued by the government on Monday 25<sup>th</sup> October 2010. The first explosion was heard the following day, Tuesday October 26<sup>th</sup>: this was a big eruption. Because of the rapid development of the situation, the remaining evacuation was made in a big rush once the "Awat" alert was issued. The government evacuated part of the population and the newly formed DRR forum undertook the evacuation of the rest of the population and evacuated more than 4,700 people by themselves. Cattle were also evacuated or had been sold in the previous days. In Ngargomulyo village, the head of the village named Pak Yatin, said the DRR forum and the village officials were able to quickly organize the evacuation.

One of the elders at the evacuation point, Pak Sailun, stated: *"Even though there was panic because people were scared, since the evacuation points and routes were all clear and we knew exactly where we were heading to, the evacuation was managed efficiently."* In his opinion, this is also a part of the reason why there were no casualties in his village.

**Look after community assets** During the week that followed, a week of eruptions and continued evacuation, the DRR forum and the head of village managed to coordinate the young people of their village to look after the community assets, whilst the villagers remained safe in the evacuation posts west of Merapi's crater.

**Keep track on new developments** Some of the DRR forum members were staying at the village office in order to be able to monitor the situation and provide information on the volcano's activities.

**Coordinating distribution of aid** The DRR Forum is also the focal point of distribution of aid. With the assistance of volunteers from the local community, the DRR forums distributed aid to the displaced villagers. They collected village data on the number of items needed and for how many households these were needed so that Bina Swadaya and Cordaid could support the DRR forums by procuring hygiene kits, baby mattresses and blankets and baby food to meet the needs of especially the most vulnerable. The DRR forums managed to find vehicles to do the distribution from one evacuation point to another. The information dissemination about the DRR forums was so good that

the community now knows that any people coming to the village with aid should contact the DRR forum members who are responsible to receive the contribution and manage its distribution.

**Coordinate with the government** The DRR forums try to actively involve the government in assisting in evacuations and providing aid, like water, food and shelter to the ones evacuated.

### Valuable lessons

Damages and casualties were decreased due to CMDRR since timely evacuation was facilitated by prepared evacuation routes.

**Organization** The DRR forums took up their role very well and were well able to organize the community, its evacuation and the distribution of aid.

**Awareness** The CMDRR programme ensured a higher awareness of all villagers about the risk coming from the volcano, which in turn caused a higher willingness to evacuate in time.

**Preparedness** There was less panic in the villages during evacuation, since people knew what was going to happen and where they were going, thanks to the marking of evacuation points and the dissemination of the village preparedness plans done earlier by the programme.

**Decisiveness** People did not wait for the government to take the initiative of evacuating, they started evacuating the most vulnerable by themselves.

As Pak Maryoto, the head of DRR Forum in Ngargomulyo said: *"In the past it was impossible to urge the community to evacuate before the eruptions had started and they could see the evidence visually. But after the DRR Forums organized an evacuation simulation in the village, made a clear route for where people had to go in case of evacuation and discussed widely about the importance of being organized together - the village developed a standard operation procedure on how the village would be organized in the event of an eruption of Merapi. This was shared with the government at district level. Also children were taught about the dangers of the volcano in school. This time evacuation was managed early and it was well organized. The village suffered no casualties."*



Pak Maryoto front (blue T-shirt, the "uniform" of the DRR Forum) sitting with villagers in the evacuation tents, or home for the time being, photo by Ama Harwani

*On the 3<sup>rd</sup> of November the villagers had to leave the evacuation posts 10km from Merapi's crater and move to safer locations 15km from the crater. On the 5<sup>th</sup> of November they had to move again to locations 20km away from the crater.*

*Cordaid and Bina Swadaya will continue to support and follow the DRR Forums in the future.*

*Note: This document was written on the 4<sup>th</sup> of November, when the volcano of Merapi was still very active. Therefore it could be the case that some facts mentioned in this article, like the number of evacuated people, have turned incorrect by time of reading due to the fast changes in the situation. To know how things worked out after the 4<sup>th</sup> of November, read 'Experiences with the Eruption of Mount Merapi in Indonesia part II: Re-evacuation and Response.'*

#### More information

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